

REMARKS

Claims 1-60 remain in the referenced application. Claims 1, 7, 10, 11, 13, 21, 27, 30, 32, 40, 48, 51, and 53 have been amended. Claims 21-39 have been allowed.

Claim 10 stands rejected under 35 U.S.C. §112, second paragraph. Responsive thereto, Applicant has amended claim 10 by deleting the term “mixed alkaline metal compounds” and substituting therefor “fracturing fluid”. Applicant accordingly respectfully submits claim 10 is no longer indefinite and therefore respectfully requests the withdrawal of the 35 U.S.C. §112, second paragraph, rejection of that claim.

Claims 1-7, 11-20, 40-48, and 51-60 stand rejected under 35 U.S.C. §103(a) by Lemanczyk et al. (U.S. Patent No. 4,784,694 – hereinafter referred to as Lemanczyk). Responsive thereto, Applicant has amended independent claims 1 and 40 to recite the alkaline buffer as a “non-delayed” alkaline buffer. Applicant has further amended independent claims 1 and 40 to recite the alpha-hydroxycarboxylic acid delaying agent as an alpha-hydroxycarboxylic acid “gelation” delaying agent. Applicant accordingly respectfully submits Lemanczyk does not disclose, teach, or suggest a “non-delayed” alkaline buffer.

Lemanczyk discloses a fracturing fluid including a polymer, a cross-linking agent, an acid buffer, and a “delayed” base. The Lemanczyk “delayed” base functions to facilitate cross-linking by raising the pH of the fracturing fluid to above pH 8. As such, the Lemanczyk base must be “delayed” or the desired cross-linking occurs too rapidly, resulting in the fracturing fluid gelling prior to delivery into an underground formation. In contrast, Applicant’s alkaline buffer is “non-delayed” in that it rapidly raises the pH of Applicant’s fracturing fluid to about pH 9 to about pH 12. Furthermore, Applicant’s “non-delayed” base is not added to facilitate cross-linking but merely to rapidly raise the pH of the fracturing fluid. Cross-linking delay is in fact provided by Applicant’s claimed alpha-hydroxycarboxylic acid “gelation” delaying agent. Applicant’s “non-delayed” base thus merely rapidly raises the pH as part of a highly thermally stable fracturing fluid formulation. Applicant accordingly respectfully submits claims 1-7, 11-20, 40-48, and 51-60 as amended are patentable over Lemanczyk because Lemanczyk does not

disclose, teach, or suggest a "non-delayed" alkaline buffer that rapidly raises fluid pH without facilitating cross-linking of the fracturing fluid.

Claims 8-10, 49, and 50 have not been rewritten based on the amendments to claims 1 and 40 and the preceding arguments.

The prior art made of record in the referenced application has been reviewed by Applicant and is

- deemed not to anticipate nor render obvious the claimed invention.

• In view of the foregoing, Applicant respectfully requests reconsideration of the rejected claims and earnestly solicits early allowance of the application.

Respectfully submitted,

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CERTIFICATE OF MAILING

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